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INTELLECTUAL COMMITTEE TO MEET AT GENEVA

Leaders in the intellectual work of the world from the principal nations are meeting at Geneva this month in connection with the annual sessions of the League of Nations' Committee on Intellectual Cooperation.

This committee, organized four years ago and including in its membership such leaders in science, art and literature as Einstein, Mme. Curie, Henri Bergson, Millikan, Gilbert Murray, Lorentz, Painleve, Mlle. Bonnevie, L. de Torres Quevedo, and A. de Castro, this year has a program that includes discussion of problems vital to the spread and interchange of the world's intellectual endeavor.

A proposal for an international meteorological office, the question of a property right in scientific discovery, methods for the identification of art treasures, the establishment of an international clearing house for museum records and information, new principles in copyright laws, exchange of students and professors, and methods of cataloging and abstracting the scientific literature of the world are among the topics on the agendas as transmitted to the American National Committee on Intellectual Cooperation which has offices with the National Research Council, here.

The subcommittee on art andletters will consider methods of authenticating the art treasures of the world so that forgeries and fakes will be less frequent. It is also proposed to establish in Paris a central office of museums in order to list the contents of museums and arrange exchanges. The subcommittee will discuss some method of encouraging and recording translations of leading books into other languages. In connection with a proposal by Mme. Curie, fellowships and scholarships are to be considered by the subcommittee on university relations. The work of the International Institute for Intellectual Cooperation established last fall will also be reviewed.

Dr. Vernon Kellogg, permanent secretary of the American National Research Council, will be the American representative at the committee's plenary sessions on July 26 and 27 acting as alternate for Dr. R. A. Millikan.

FRENCH TO HOLD 50th SCIENTIFIC MEETING AND INDUSTRIAL EXHIBIT

Exhibits of all that French scientists are doing in the fieldof pure and applied science will be on view at the fiftieth congress of the French Association for the Advancement of Science to be held in Lyon beginning July 24.

The meetings will be presided over by Dr. Alfred Lacroix, the permanent secretary of the French National Academy of Sciences, in the exposition building of the city of Lyon, which offers unique advantages for displaying the numerous exhibits. The wide range of the whole congress over the fields of chemistry, physics, medicine, the biological sciences, sociology, and in fact everything of an industrial, practical or theoretical nature that comes within the scope of science, is expected to attract the presence of experts from all over Europe.

Papers will be read summarizing results of French scientific research in every line from the latest cancer treatment to teaching peasants modern methods of farming. Guests at the congress will have opportunity to see places of widely varying scientific interest in which the region around Lyon abounds under the guidance of the scientists who know most about them. Excursions have been arranged to visit, among other places, Solutre, one of the famous sites where remains of men of the stone age have been unearthed. A typical stratum will be shown to visitors and explained by Prof. C. Deperet, of the department of geology at the University of Lyon. Chief among the places of interest to workers on industrial problems will be a trip to the hydro-electric factories of the upper Rhone.

FRENCH SCIENTISTS TO CONFER ON CROP PROTECTION

Lyon, France, is to be the scene of an important gathering of scientists next year.

On June 28, 29, and 30, 1927, experts from all over the country will convene at Lyon under the leadership of M. Mangin, director of the French National Museum of Natural History to discuss ways of protecting the agriculture of France against its parasitic enemies.

Papers will be read summarizing the results of laboratory research throughout the country on the fungus and insect attackers of vineyards, fruit trees, and flowers grown for commercial purposes, as well as truck and cereal crops.

Artichokes, both the "globe" and the "Jerusalem" varieties, are close relatives of the common sunflower.

SCIENCE IN ESPERANTO TAUGHT AT EDINBURGH

In connection with the 18th Universal Esperanto Congress to be held at Edinburgh from July 31 to August 7 an international summer school with all courses given in Esperanto will be held.

Science, medicine, folk lore, linguistics,and international law are the branches of learning in which courses will be offered. Among the professors of various nations who will lecture in the international tongue are Prof. Collinson of the University of Liverpool, Prof. Bujwid of the University of Cracow, Dr. Pascal Deuel of Leipzig, Dr. E. F. Fournier d'Albe and the Italian R. Orengo, Dr. Stromboli of Pisa, and Mr. Tarelli of the International Labor office in Geneva.

THE SUN A VARIABLE STAR; NEW EVIDENCE BY NEW METHOD

The sun is a variable star. This central fire of the planetary system does not glow with a steady heat but flickers from day to day and from year to year, and the vagaries of our earthly weather must depend at least partly on the sun's variations. This opinion, which has been supported for many years by Dr. C. G. Abbot of the Smithsonian Institution, finds new support in evidence produced by a new system he has devised for measuring and recording the changes in the energy reaching the earth from the sun,

Dr. Abbot calls attention to the work of H. H. Clayton, who has announced that he finds variations of weather caused by solar changes. But many meteorologists have not been convinced that the sun really varies. They fear that the complicated measurements of Dr. Abbot, hindered as they are by the haziness andhumidity of the earth's atmosphere, are not conclusive. The variability which he reports, they suggest, may all be due to unavoidable atmospheric sources of error.

Dr. Abbot now announces a very direct test that should settle the question. Although it is impossible to do the measuring from a point outside the atmosphere, yet it is possible to select times when the transparency and other affecting qualities of the air are closely alike, and the sun stands at equal height above the horizon. At such times the solar heating should vary only if the sun does.

Selecting the month of July in the years 1910 to 1920 for his test, he collected results observed on Mount Wilson for all days of practically constant atmospheric conditions. The average monthly values thus selected he compared with those obtained by the usual process and heretofore published. He also compared them with the average monthly numbers of sun spots. The three curves that express his results run along very closely together. They show that the sun's heating in July 1917, averaged over 2 per cent. above that of Julys, 1910 and 1911. Correspondingly, the sun spot numbers were 117 in July, 1917, and only 14 and 3, respectively, in Julys, 1910 and 1911.

Not content with this proof of the reality of long-range solar changes, Dr. Abbot rearranged the measures in a way to test short-interval solar variation. For this purpose he picked out from the new data all the days that gave high values of solar heating, and all those which gave low ones. The average excess value for

51 high days was plus 1.43 per cent., and the average defect for 51 low days was minus 1.47. The same days, as already published four years ago, indicated on the average plus 0.51 and minus 0.42 per cent., respectively. Thus the days shown above normal by the new method of selecting times of equal atmospheric clearness had already been shown as above normal by the usual process, and vice versa. Of course the range as formerly published could not be so great, because the errors of observation could not be expected to fall the same in the two sets of data. Some days would be high and some low, not because of the sun's condition, but because the small observational errors helped to make them so.

Dr. Abbot's new method, he hopes, may be convincing of the sun's real variability. This will make all the more important and interesting his establishment under the joint auspices of the National Geographic Society and the Smithsonian Institution of a new solar observatory on Brukkaros Mountain in Southwest Africa. This site he selected last March after studying on the ground conditions in Algeria and Baluchistan. The mountain is 5200 feet high in a desert where the yearly rainfall averages only three and one half inches. Roads and construction are rapidly going ahead under the supervision of Mr. A. Dryden, inspector of public works for the government of Southwest Africa. The complex apparatus required has been prepared, and the expedition is expected to go forward about August 1 in care of W. H. Hoover, director, and F. A. Greeley, assistant.

SCIENTISTS URGE HARVEST TIME WAR ON GRAIN INSECT PESTS

Immediate fumigation to rid the 1926 wheat, corn and other cereal crops of insect pests immediately upon harvesting is urged by Drs. E. A. Back and R. T. Cotton, entomologists of the U. S. Department of Agriculture, as a means of saving American farmers millions of dollars this year. Ignorance of control methods, it is claimed, costs farmers a large share of their profits each year by causing them to sell their newly harvested grain as soon as possible to avoid loss from insect attack. By treating it themselves at small cost they could hold their grain longer and realize later on good market returns.

"What the farmer or corporation with financial backing has found profitable the farmer with limited means will also find profitable," Dr. Back said. The Department of Agriculture has made a study of the various chemicals used as fumigants and recommends several as simple enough for use on farms, and harmless and effective if rules are followed. Among these are carbon bisulphide, carbon tetrachloride and a mixture of the latter with ethyl acetate.

Studies by Dr. Back and others have shown that nearly all cereal crops, except those of the far North, are more or less infested when the grain ripens in the fields at harvest time, and delay in getting the crop under cover where it can be treated gives the insects a chance to multiply and spread to the other kernels. Even a single day's delay is costly. Fumigation can destroy every insect in the bins, but this is done more easily immediately upon harvesting.

Although the idea that insects generate of themselves from the "germ of the grain" has long been exploded, many farmers and grain dealers still believe in this

virgin birth of insect pests, just as many people believe that fleas just naturally grow on dogs. Study has shown that the grain insects fly and are not at all partial to harvested grain in bins and granaries. The rice weevil and grain moth winter in the bins but spend the spring and summer in the sunny fields of green corn and wheat and lay eggs on the wheat heads and corn ears. It is really when the grain is still in the "milk stage", or just teething as it were, when the troublesome infestation really begins.

"YES" LOSING HOLD IN AMERICAN SPEECH

There are too many substitutes for the word "Yes" in the English language, says Prof. Louise Pound of the University of Nebraska in a recent article in American Speech.

Foreigners and teachers of English remark concerning the lessening use in our American speech of the affirmative, "yes". It is still used in written discourse but it seems to be disappearing from oral speech. "Yes" is a compound of "yes-so," or perhaps of the old Anglo-Saxon "gea si", "yea be it". It was well established by the sixteenth century, alongside the historic affirmative "yea" and the competing "aye", which appeared in the last part of the century. "Yes" is now being replaced by a variety of forms.

A canvass of substitutes for "yes" in a room containing more than a hundred young people brought to light the following list as well as others of less interest. Substitutes like "all right", "you bet", "O. K", and the group of nasal expressions, "nh-nh", "uh-huh", etc., were not taken into account. All of the forms listed below were known to many persons among the hundred or more questioned. Those known to only a few individuals were not taken.

yeth	chahss	yap	chassm	ye-ug
yum	chuss	yop	hya	ye-yess
yo	'es	yup	eye-ah	yeh
yaw	yair	yurp	yass	ye-ah
yezz	chow	yis	yahss	yessir
chess	yip	yuss	yazz	shassm
chass	yaw	yays	yahzz	yar

Mainly, these mutilated forms of "yes" are colloquial. But they are employed by many who seem never to use "yes" in its standard form.

A kind of Indian corn is grown in Missouri because the large cobs make good corn cob pipes.

NEW VACUUM SWITCH STOPS IMMENSE CURRENTS SAFELY

Radical changes in electrical engineering practice are expected to follow the recent tests of the vacuum electric switch, the first outstanding product of the new high-tension laboratory of the California Institute of Technology. The new discovery is by R. W. Sorensen, professor of electrical engineering in the Institute.

Turning off a one-horse-power motor by the simple pulling of a switch releases a harmless blue spark, but when a hundred thousand horsepower of current is flowing, any attempt to interrupt the flow in the open air is about equivalent to the setting off of a dynamite bomb. Enormous oil-immersion switches, sometimes occupying acres of ground, have been developed in the attempt to quench the terrific arc that follows the breaking of the circuit.

In contrast to the huge oil switches, Prof. Sorensen's switch operates in a small glass bulb from which all possible air is exhausted. With the aid of Dr. R. A. Millikan's high-vacuum laboratory Prof. Sorensen was able to remove all but one billionth of the original air content of the tube. Advantage is thus taken of the fact that an electric current will not travel through a vacuum.

For the tests held at the large Laguna-Bell switching station the Southern California Edison Company furnished a current of 1000 amperes at 43,000 volts, while its inspecting engineers stood at a very respectful distance, expecting fireworks. Although the switch opened a gap only one inch across, the whole current of over fifty thousand horsepower stopped instantaneously without a tremor. The oscillograph record of the current flow, which can easily detect a thousandth of a second of after-disturbance, indicates a clear break in the record as if somebody had sliced the paper with scissors.

With great city installations requiring theinterruption of hundreds of thousands of horsepower of electricity the new vacuum switch promises to be of wide use. Simplification of the apparatus will mean extensive application to larger industrial motors - 15 horsepower and up - now requiring oil immersion switches.

EGYPT IMPORTED GLASS MAKERS FROM EUPHRATES

As long ago as 2500 B. C. the inhabitants of the Euphrates valley were making glass and a little later were selling it to the Egyptians. Then about 1500 B.C. some personage unknown had the bright thought of importing glass makers. Fifty years after the advent of the Syrian artizans into Egypt, according to Sir Flinders Petrie in a recent lecture before the members of the Society of Glass Technology at University College, glass was of as relatively common occurrence in that country as it is on the ten cent store counter of today.

There is no question that the ladies of ancient Egypt loved adornment,for beads, popular then as now, formed the principal use for glass. They were made not from liquid glass, since glass-blowing did not come into practice until the Christian era, but from glass paste. They also used it for making weights of considerable accuracy, said Sir Flinders, three of the same denomination having proved on testing to agree within one-two hundredth of a grain.

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RETURNING ELGIN MARBLES TO ATHENS ARGUED

The Elgin marbles, which are the pride of the British Museum, the regret of Greece, and the despair of all sculptors who ever saw them, are again in the limelight. The Greek government is setting up the columns of the Parthenon again, using for the most part the ancient segments which have been lying near the temple ever since the Venetian shell blew it up in 1689. And agitation has been started as to whether the British Museum should not now restore to Athens bas-reliefs that have been in England for over a century.

In the opinion of Dr. R.V.D.Magoffin, president of the Archaeological Institute of America, the Elgin marbles should find their ultimate home in Athens.

In a statement made to Science Service, Dr. Magoffin said:

"It has been the artistic world rather than Great Britain which has insisted that the Elgin marbles remain in London. In the first place they were safe, and in the second place, many more people could and would see them there.

"The propriety of having the marbles in Athens is, of course, unquestioned. The willingness and scientific ability of the Greeks to care properly for them is admitted. The chief question remains: Has the political stability of the Balkans reached the point where there is no possibility of a war in which Athens might be shelled?"

Dr. Magoffin believes that Lord Elgin did both Greece and the artistic world a service when he salvaged the marbles from the ruins of the Parthenon in 1802 and carried them to England.

"Had they remained in Athens, many of them would have been destroyed, and the rest would certainly have suffered from weather or unscientific handling," he said. "Proof of this can be seen in the British Museum today on the walls in the Elgin Room, where two sets of casts are placed one above the other, one made a good many years ago and the other made lately. All of the later casts show thehard usage of man or time, and in a few cases the later cast shows the present marble to be so mutilated that without the earlier cast the entire meaning of the sculpture would be lost."

Sir Charles Waldston, British archeologist who recently spent some time in Greece, has discussed the situation at length on his return to London. His attitude is that the Elgin marbles could not in any case be set up on the Parthenon because they could not stand the exposure to weather, and consequently the marbles cannot play a part in thepresent restoration of the temple. So long as the sculptures cannot be returned to the building itself, he considers that the Greek desire to have them in the museum at Athens is no argument at all for their return.

As a substitute gesture of good will from England to Greece, he suggests that the Greeks are very anxious to have cement casts of certain parts of the triglyph-frieze of the Parthenon; and as these bas-relief sculptures are in the British Museum, he has asked that England present about 23 cement casts to the Greek government.

INDIANS, AND NOT VIKINGS, MADE DISPUTED ROCK CARVINGS

The ancient rock carvings along the Columbia River, which are translated by Prof. Oluf Opsjon, of Spokane, as runic inscriptions made by Vikings in the eleventh century, tell a big story but it is an Indian story and not a record of Viking exploration in western America, according to Herbert W. Krieger, curator of ethnology of the National Museum, who has just returned from three months stay in the region of the rock pictures.

Mr. Krieger spent some time studying the petroglyphs, which are numerous along the Columbia River, and has a number of photographs, including some from Vantage Ferry, where Prof. Opsjon claims to have found runic inscriptions.

"The pictures pecked in the hard basalt are extremely crude," said Mr. Krieger, "and any one can read into them anything he likes in order to make a plausible story. To say that they are Viking remains is to read into them something that is not in the pictures themselves."

Crude as they are, some of the objects scratched out on the rocks are typically Indian, Mr. Krieger points out. In the carvings can be seen such objects as bows and arrows and a representation clearly meant for a feather headdress.

Considering the numerous rock pictures along the river as a whole collection, he finds evidence that they tell the story of tribal migrations in search of food, and the use of the Columbia River as a path ofmigration. They are mostly hunting and fishing scenes, he believes. Mountain goats and curved horned mountain sheep are frequently portrayed. But why these artists left such records to be preserved in the hard stone and what it was they wanted to communicate can only be guessed at, in the opinion of this ethnologist. They had no system of fixed symbols with one or two exceptions, so there is no hope of finding a key to the mystery.

TESTS SHOW WOMEN WORK FASTER THAN MEN

Women can do more work in a given time than men but men still retain their superiority in matters of judgment.

These results are shown in a series of experiments conducted by the Psychological Laboratory of Johns Hopkins University and described by Isabel C. Steward in a recent paper.

Tests were given 542 women and 542 men, college students in different sections of the country, ranging in age from 16 to 39, the average being about the same for men and women.

Similar tests in the past have been concerned almost wholly with school children, and indicate that girls show greater speed and accuracy in performance but do not measure up to the boys in judging weights and distances.

The work in these tests consisted in substituting letters for symbols. The work to be done was fully explained and a key to the symbols given at the top of the

work sheet. The judgment tests required each student to estimate in advance how much of the work of substitution could be done in the given time. Two tests were given, the first one for one minute and fifteen seconds and the second for one minute.

The results were carefully analyzed and tabulated. No appreciable difference was shown between the men and the women in their attention to directions or in the accuracy of their work in substituting letters for symbols, but the women did more work than the men. On the other hand, in estimating the amount of work they could do in a given time the men were more accurate.

In both the estimating work and in the work of substitution, the women showed slightly more variation among themselves than the men. It has generally been accepted that men were more variable than women though there has been some difference of opinion among psychologists on the subject.

RUBBER BLOCK PAVEMENT SUCCESSFUL IN BOSTON

Tests on rubber block pavement, laid one and one-half years ago at the entrance to City Hospital, in Boston, have shown marked advantages. In addition to having worn but little during the interval, the pavement has the advantage that snow and ice do not collect on it in winter as on other types of pavement, thus doing away with slipperiness. The blocks are also almost noiseless and vibrationless.

These rubber paving blocks are an invention of R. F. Herrick, a consulting engineer of Boston. They are made largely of reclaimed rubber. Those used in the present test are 12 by 6 inches in area and 2 inches thick, and are laid in plastic sand and cement directly on the street foundation. Their edges were given a coat of asphalt paint immediately before laying.

TABLOID BOOK REVIEW

SUNSHINE AND OPEN AIR, by Leonard Hill. New York: Longman, Green & Co. $3.75.

This is not a fad book though it is on a faddy subject. Dr. Hill is the director of the Department of Applied Physiology of the National Institute of Medical Research, London, and he sums up in 150 pages the results of many years of experimentation in the laboratory and in the Alps on the effects of ultra-violet light and other forms of radiation on the maintenance of health and the cure of disease. Here one may find in compact form the latest scientific data on this question which is not so simple as it seems. There are harmful as well as beneficial rays and the boundaries between them are closely defined.

LANDMARKS IN THE STRUGGLE BETWEEN SCIENCE AND RELIGION. By Prof. J.Y.Simpson. New York: Doran. 1926. $2.00.

A valuable and timely contribution to this current and recurrent controversy. The author is Professor of Natural Science in New College, Edinburgh, and he handles both the theological and scientific sides with equal competency and impartiality. He is fairer to the church fathers than Draper or White, and has the advantage in living in a less materialistic century. The numerous footnote references and quotations make the volume a cyclopedia, yet it reads fluently. Here is one of its interesting anecdotes:

> "'There are reverent minds,' read Henry Drummond from the proofs of The Ascent of Man to three friends as they sat together in a field under a hedge in Low Glen Cloy in the Island of Arran one day near Eastertide of 1894, 'who ceaselessly scan the fields of Nature and the books of Science in search of gaps - gaps which they will fill up with God. As if God lived in gaps?' Then, looking up for a moment, he added, as if by way of explanation, 'There was a foolish man who wrote a book to show that God existed only in the gaps.' Whereupon one of his listeners remarked, 'But why take notice of him? All that he said will have been forgotten.' To which the answer came, 'Mrs. Whyte,, I was that man.'" The reference is, of course, to his earlier work, Natural Law in the Spiritual World.

POISON IVY, by James B. McNair. Chicago: Field Museum of Natural History.

Dr. McNair has done an excellent job of boiling down into a pamphlet of a dozen pages the essential points covered in his exhaustive book, Rhus Dermatitis. Sufferers from ivy poisoning and summer wood-rovers generally will find this a very handy bit of literature to have about.

THREE MEN DISCUSS RELATIVITY, by J.W.N.Sullivan, New York. Alfred A. Knopf - $2.50.

Several thousand attempts have been made since 1915 to explain Einstein's theory to the common mind but this is a new way. Mr. Sullivan does not dodge the mathematics as do most ofhis predecessors, but assuming that his readers have at least "studied mathematics in their youth" he takes them by easy stages into the tangle of tensors and the mazes of non-Euclidian geometry. In his Platonic dialog the three characters, a Philosopher, (who interposes appropriate questions) an Ordinary Intelligent Person, (presumably the reader) and a Mathematical Physicist, (provided with a blackboard) present various aspects of the revolutionary conceptions of relativity.

There are no polar bears, or any other land animals, in the south polar regions, according to the explorer Stefansson.